



Achieve, Inc.

Achieve's American Diploma Project (ADP): A Preview

*Urban Mathematics Leadership
Network Meeting*

June 8-11, 2006

Achieve, Inc.

The American Diploma Project:

Ready or Not: Creating a High School Diploma That Counts



Achieve, Inc.

American Diploma Project

- How well prepared are our students for the world after high school?
- What does it mean to be prepared for college and work?
- What does a set of college and work ready standards look like?
- What can we do to facilitate getting all students to meet college and work ready standards?



American Diploma Project

**How well prepared are our students
for the world after high school?**

- Graduation rates
- Test scores
- College going rates
- College remediation rates
- College persistence rates
- College completion rates



American Diploma Project

**What does it take to be
prepared for
postsecondary
education and work?**



The American Diploma Project

- Partners: Achieve, Education Trust, Thomas B. Fordham Foundation, National Alliance of Business
- 2 years of research with businesses and colleges to determine essential math & English skills
- 2004 report defining benchmarks for what it takes to be successful in college or work
- Follow up reports: Exit exams (2004), graduation requirements (2004), poll (2005), 50-state report (2006)



American Diploma Project Methodology

Coming from the workplace perspective:

- **Defining workplace expectations**
- **Securing input from employers on preliminary workplace expectations**



American Diploma Project Methodology

**Coming from the postsecondary
perspective:**

- **Defining postsecondary expectations
for credit-bearing work**
 - **Test content analyses**
 - **Alignment studies**
- **Meetings with higher education faculty**



American Diploma Project Methodology

Meetings with 2-year and 4-year college faculty:

- **Define math content and skills needed for success in credit-bearing courses**
- **Locate and prioritize these competencies**
- **Determine degree to which state standards contain these competencies**
- **Identify gaps**



American Diploma Project

Convergence of workplace and postsecondary findings:

- **Similar intellectual demands**
- **Some variation in relative emphasis**
- **Importance of reasoning and problem-solving skills**



American Diploma Project

The final steps:

- **Synthesizing preliminary workplace and postsecondary expectations for review**
- **Convening content area expert/employer panels**
- **Gathering tasks and assignments from employers and postsecondary faculty**



Major Finding of ADP Research

- The knowledge & skills that high school graduates will need in order to be successful in college are the same as those they will need in order to be successful in a job that
 - pays enough to support a family well above the poverty level,
 - provides benefits, &
 - offers clear pathways for career advancement through further education & training.



ADP Workplace Study: **Key findings**

- In math, content of Algebra II is the threshold for most workers in good jobs.
- In English, most workers at all levels of employment had rigorous content equivalent to four years of language arts and literature.



American Diploma Project

**What does a set of college
and work ready standards
look like?**



American Diploma Project Mathematics Benchmarks

- **Number Sense and Numerical Operations**
- **Algebra**
- **Geometry**
- **Data Interpretation, Statistics and Probability**
- **Mathematical Reasoning Skills**
- **Cross-cutting College and Workplace Tasks**



To be college and work ready, students need to complete a rigorous sequence of courses

To cover the content in the ADP mathematics benchmarks, high school graduates need:

- Four courses
- Content equivalent to Algebra I and II, Geometry, and a fourth course such as Statistics, Pre-calculus, or some other rich capstone course



American Diploma Project Mathematics Benchmarks

- **Benchmarks, supported by examples**
- **Asterisks used to identify content recommended for all but required for students planning to take calculus**
- **Technology as an important tool in problem solving but not as a replacement for fluency and accuracy in computation**



American Diploma Project Mathematics Benchmarks

■ What ADP is:

- A set of culminating expectations for all high school students
- A set of expectations arrived at through consensus of businesses and colleges, based on what students need to be successful

■ What ADP is NOT:

- A set of expectations that defines any or all courses needed to meet the culminating expectations
- A document designed to define expectations for only some students



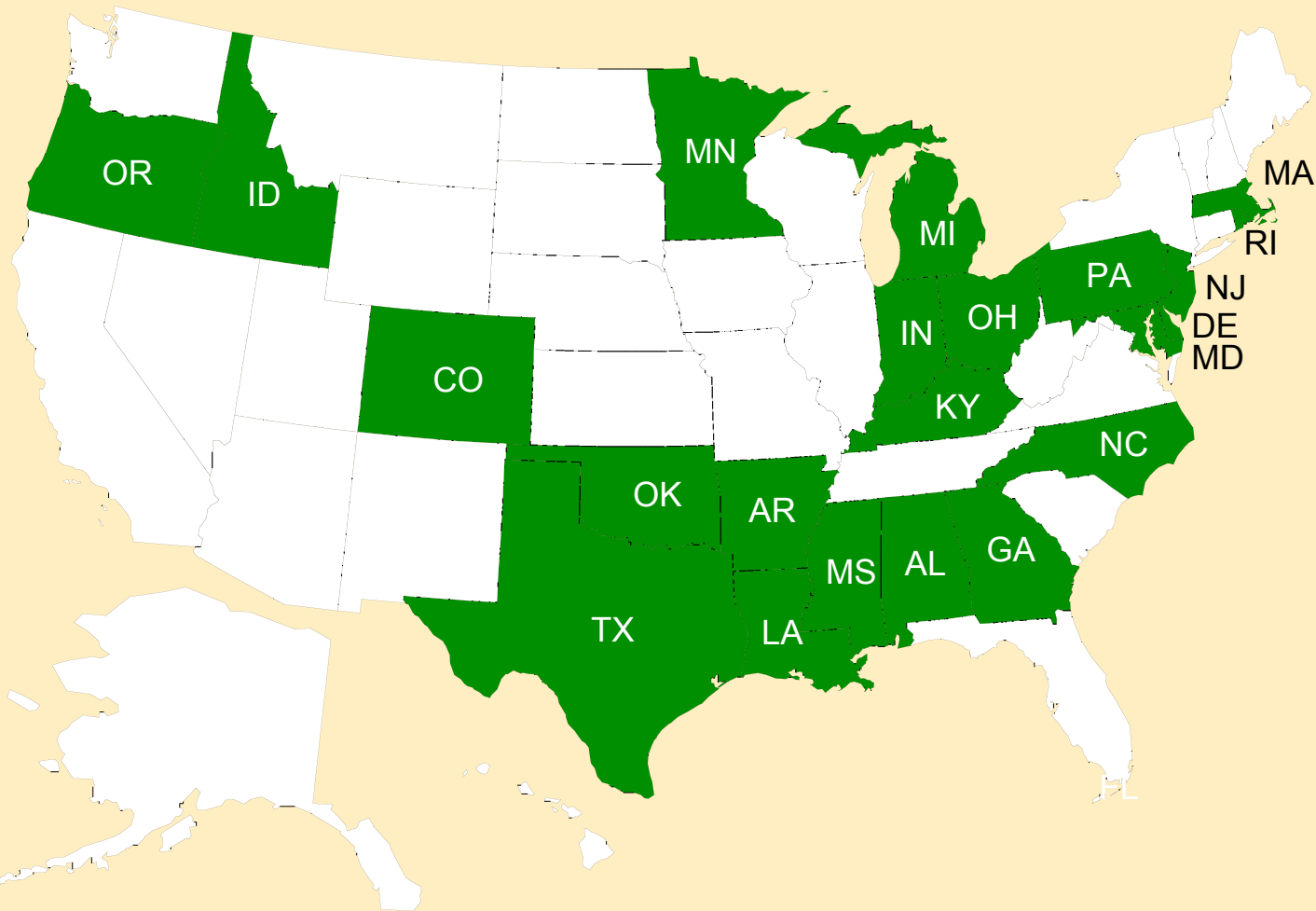
American Diploma Project Mathematics Benchmarks

How are they being used?

- **Benchmarking state high school standards**
- **Comparative analyses in states embarking upon the development of college-readiness standards**
- **Basis of comparison in analysis of tests**
- **Backmapping to create sequences of high school courses**



ADP Network: 22 states committed to improving student achievement



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American Diploma Project

**What can we do to
facilitate getting all
students to meet college
and work ready
standards?**



American Diploma Project Mathematics Benchmarks

Goal of Achieve's ADP backmapping work

- **Framework of content for high school
connecting the ADP benchmarks to Achieve's
MAP expectations (K-8 draft)**
- **Multiple exemplar course sequences**



American Diploma Project Mathematics Benchmarks

So how are we “unpacking” the ADP benchmarks?

- **Identifying assumed prerequisite knowledge and skills, using expectations from the MAP K-8 draft**
- **Defining a “universe” of content and skills by strand as a progression, rather than by grade or course**
- **Evening out the grain size**



American Diploma Project Backmapping Progression

Where are we now?

- **Draft strands circulating to experts for review: Number and Data, Discrete Mathematics, Probability & Statistics, Algebra, and Geometry**
- **Drafts of 3-course sequences (traditional and integrated) in progress**



American Diploma Project Backmapping Progression

What are the next steps?

- **Finalization of “universe” document (Summer 2006)**
- **Completion of model course sequences followed by reviews (Fall 2006)**
- **Identification/development of capstone courses and applied course sequence (Winter 2006/2007)**
- **Task development/identification to support the work**
- **Development of Algebra II end-of-course test**



Achieve ADP Algebra II End-of-Course Exam

- Requested by a subset of superintendents from ADP Network states
- Convening of math supervisors and assessment directors from interested states
- Description of core Algebra II content by mathematics supervisors
- Description of assessment parameters by test directors



Achieve ADP Algebra II End-of-Course Exam

- **Partner States:** Arkansas, Indiana, Kentucky, Massachusetts, Maryland, New Jersey, Ohio, Pennsylvania, Texas
- **States Involved in Planning Stages of Work but not Fully Engaged as Partners:** Louisiana, Michigan, Oklahoma, Rhode Island.



Achieve ADP Algebra II End-of-Course Exam

■ Core Algebra II Content

- Operations and Expressions (20%)
- Equations and Inequalities (25%)
- Polynomial Functions and their Graphs (30%)
- Exponential Functions and their Graphs (15%)
- Periodic and Piecewise-defined Functions and their Graphs (10%)



Achieve ADP Algebra II End-of-Course Exam

■ Optional Modules

- Data and Statistics
- Probability
- Trigonometry
- Matrices
- Conics
- Logarithms
- Iterative Processes



Achieve ADP Algebra II End-of-Course Exam – Next Steps

- Collective sign off by participating states on test specifications – Summer 2006
- Request for Proposal issued – Late Summer 2006
- Contract signed with test developer – Fall 2006
- Field Test – Spring 2007
- Operational end-of-course assessment in place – 2007-2008 school year



For more information,
please visit Achieve, Inc., on the Web at

<http://www.achieve.org>



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